

REMARKS

Claims 1-13 are pending in the application. The Examiner has indicated that claims 1-13 are rejected.

Claims 1-8 and 10-13

Claims 1-8 and 10-13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,618,566, issued to Allen et al. in view of U.S. Patent No. 5,445,674, issued to DeMars. The Examiner contends that it would have been obvious to modify the apparatus of Allen with a segmented manifold because such a modification would provide a segmented dispensing of material enabling different dispensing set-up arrangements and segmented control as disclosed in DeMars. Applicant respectfully disagrees.

Independent claim 1 is directed to a segmented die assembly. This segmented die assembly is of modular construction comprising a plurality of interconnected manifold segments in side-by-side relationship. Mounted to each manifold segment is an individual die module. Each manifold segment has a polymer flow passage and an air flow passage which is in fluid communication with a polymer flow passage and an air flow passage in each die module. The segmented die assembly further includes means for delivering polymer melt to at least one manifold segment whereby the polymer melt is capable of being distributed to the other interconnected manifold segments. The segmented die assembly also includes means for delivering air to at least one manifold segment

whereby air is capable of being distributed to the other interconnected manifold segments. Independent claims 10 and 12 are also directed to segmented die assemblies with features similar to those in claim 1.

The segmented die assembly of the present invention offers at least the following advantages over the prior art:

(1) In prior art designs, the length of the die assembly was dictated by the length of the one-piece manifold. In contrast, the total length of the segmented die assembly of the present invention can be adjusted by adding or subtracting individual manifold segments to achieve the length required for a particular application. That is, the segmented die assembly of the present invention will be made up of only active manifold segments.

(2) The manifold segments are substantially identical and interchangeable, and are simple in construction. The machining of the small segments is much easier than that required for bulky integrated, i.e., one-piece, manifolds.

(3) If a manifold segment becomes plugged or damaged, it can easily be replaced by a new manifold segment. In prior art devices, the entire manifold would have to be replaced.

The features of independent claims 1, 10 and 12 are neither taught nor suggested by the combination of Allen with DeMars. Allen discloses a plurality of side-by-side die modules 12 operatively connected to a manifold assembly 11.

The manifold assembly 11 includes separate elongate blocks 81, 82 and 114 to distribute a polymer melt and air to each of the modules 12. The Examiner concedes that Allen does not disclose a manifold comprised of a plurality of manifold segments as claimed in the present application.

DeMars discloses a device for dispensing thixotropic sauce onto pizza crusts. Specifically, the device includes gear driven pumps 21-27 which receive material such as tomato sauce from a supply tank 10. The pumps 21-27 discharge the tomato sauce through a plurality of outputs 31-37 to a plurality of electrically actuated valves 41-47. If the valves 41-47 are "on," the tomato sauce flows through supply ports 51-57 which deposit the sauce onto the surface of a pizza crust 60. Unlike the segmented manifolds of the present invention, the gear driven pumps 21-27 do not contain air flow passages.

Applicant submits that there is no teaching or suggestion to modify the dispenser of Allen with the teachings of DeMars to render the claimed segmented manifold obvious. "Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." *In re Geiger*, 815 F.2d 686 (Fed. Cir. 1987). Accordingly, Applicant submits that the Examiner has failed to make a *prima facie* case of obviousness.

There is no suggestion in Allen that the die assembly would benefit if the one-piece manifold 11 was modified to include the gear driven pumps 21-27 as

shown in the DeMars pizza sauce delivery service. Such a modification would lead to a more complicated manifold since it would then include gear driven pumps. In addition, the pumps 21-27 do not include the claimed air passages to supply air to the individual die modules.

Furthermore, even if one were to combine the teachings of DeMars with the dispenser of Allen, the dispenser would still not meet all the features of independent claims 1, 10 and 12. In each of those independent claims, the manifold segments include at least air flow passages and polymer flow passages. Specifically, the air flow passages of the segmented manifolds are in fluid communication with air flow passages in the individual die modules. The gear driven pumps 21-27 do not contain air passages. Moreover, Allen discloses three separate manifolds or blocks 81, 82 and 114. Consequently, neither of these references teaches or suggests the use of single segments having both air and melt passages. Therefore, segmenting the dispenser components of Allen in accordance with any fair reading of DeMars would not provide a dispenser with all the features of the claimed segmented die assembly.

Applicant submits that, for at least these reasons, independent claims 1, 10 and 12 are non-obvious in view of Allen and DeMars and the other cited art. Claims 2-8, 11 and 13 depend from independent claims 1, 10 and 12 and are therefore also in condition for allowance for at least the same reasons.

Claim 9

Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Allen in view of DeMars as applied to claims 1-8 and 10-13 and further in view of U.S. Patent No. 4,687,137, issued to Boger et al. The Examiner contends that it would have been obvious to modify the apparatus with heaters in the manifold because such a modification is well known and conventional in the art as disclosed by Boger. Claim 9 depends from independent claim 1 which is in condition for allowance for the reasons set forth above. Accordingly, claim 9 is also in condition for allowance for at least the same reasons.

CONCLUSION

As a result of the amendments to the claims and the remarks given herein, Applicant respectfully asserts that the rejections of claims 1-13 have been overcome. Further, Applicant asserts that claims 1-13 are allowable and request notification of same at the Examiner's earliest convenience.

If there is any additional matter that may be resolved by telephone or fax, the Examiner is invited to contact the undersigned to expedite issuance of this application.

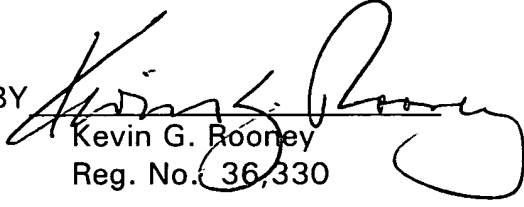
Applicant does not believe that any fees are due in connection with this response other than the extension fee. However, if such petition is due or any

fees are necessary, the Commissioner may consider this to be a request for such and charge any necessary fees to deposit account 23-3000.

Respectfully submitted,

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